



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/956,901	09/21/2001	Cary Lee Bates	ROC920010077US1-IBM	2658
	7590	09/15/2004	208	
Robert H. Berdo, Jr. RABIN & BERDO, P.C. Suite 500 1101 14th Street, N.W. Washington, DC 20005			EXAMINER KHATRI, ANIL	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/956,901

Applicant(s)

BATES ET AL.

Examiner

Anil Khatri

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 5, 6, 10, 14, 15, 19, 21, 24, 25, 30, 34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by *Sreedhar et al.* USPN 6,182,284

Regarding claims 1, 6, 14, 19, 25 and 30

*Sreedhar et al* teaches,

- displaying a portion of a program call graph (PCG), wherein said PCG includes a P-node symbolically representing a first procedure and a procedural relationship symbolically

Art Unit: 2124

representing a calling association from first procedure to a second procedure (column 4, lines 4-21, "the first representation... are described").

Regarding claims 2, 10, 15, 21 and 34

*Sreedhar et al teaches,*

- determining a condition for said first procedure while executing the computer program; and (column 6, lines 17-45, "the first instruction... values are identical");
- marking said P node based on said condition into a marked P node, wherein said marked P node is visually distinguishable from said P node (column 8, lines 46-65, and "an important characterization. block B2 106").

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2124

Claims 3, 4, 7-9, 11, 12, 16,17, 20-22, 23, 26-28, 31-33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sreedhar et al* USPN 6,182,284 taken with *Buzbee et al* USPN 6,275,981.

Regarding claims 3, 11, 16, 22, 26, 27 and 36

*Sreedhar et al teaches*

- first procedure being executed, and wherein execution age is a time interval since first procedure has been executed but does not explicitly disclose condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein execution state corresponds to either first procedure having been executed or first procedure being non executed, wherein execution frequency is a rate. However *Buzbee et al* teaches, condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein execution state corresponds to either first procedure having been executed or first procedure being non executed, wherein execution frequency is a rate (column 9, lines 15-35, “the groups of structure... execution of a program”, figure 3, column 11, lines 1-25, “the control flow... frequencies of execution”). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the frequency that control flows through each edge to modify execution at different time. The modification would have been obvious because one of ordinary skill in the art would have been motivated to collect debugged data during execution and represent visually.

Regarding claims 4, 12, 17, 23, 28 and 35

*Buzbee et al teaches*

Art Unit: 2124

- changing a symbolic attribute from an unaltered P node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic (column 2, lines 6-20, "profile data may be... instruction correspond").

Regarding claims 5, 13, 18, 24, 29 and 37

*Sreedhar et al teaches*

- creating a list of a plurality of PCG procedures from said portion of said PCG (column 25, lines 38-47, "the class "controlFlowGraph" implements...getNextPhi"); and
- recording said list of said plurality of PCG procedures onto a memory, said memory being retrievable (column 9, lines 18-34, " in a second step... indicated in figure 3").

Regarding claims 7-9, 20, 21 and 31-33

*Buzbee et al teaches*

- displaying within said B node a line number associated with a source code statement of the computer program (column 2, lines 6-20, "profile data may be... instruction correspond").

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- USPN 5535395
- USPN 5485616
- USPN 6651247
- USPN 6327699

Art Unit: 2124

- USPN 6026241
- USPN 6631518
- USPN 5867711
- USPN 5655122

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil Khatri whose telephone number is 703-305-0282. The examiner can normally be reached on M-F 8:30-5:00 PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

\*\*\*

  
**ANIL KHATRI**  
**PRIMARY EXAMINER**